

SOFT TIP GUIDING CATHETER AND METHOD OF FABRICATION

ABSTRACT OF THE DISCLOSURE

5 The present invention relates to medical vascular catheters adapted to be inserted into a blood vessel from an incision through the skin of a patient for introducing other devices or fluids for diagnostic or therapeutic purposes, and particularly to an improved distal soft tip or segment attachment with a relatively stiff proximal catheter shaft. A tubular sleeve is bonded through the application of pressure and heat to a distal portion of the catheter shaft and a proximal portion of the distal segment of soft distal tip bridging the attachment junction. In the preferred method, the catheter shaft distal end is aligned with the distal segment or soft tip proximal end and the sleeve is fitted over the attachment junction. A heat shrink tube is fitted over the sleeve and adjoining portions of the catheter shaft and the distal segment or distal soft tip and heat is applied. The shrinkage force of the heat shrink tube over the assembly of the tubular sleeve overlying and bridging the attachment junction and the applied heat melts and force the materials of the tubular sleeve and the catheter shaft and the distal segment or distal soft tip together to fill interstitial spaces of the attachment junction and reduces the outer diameter of the sleeve. The heat shrink tube is removed after the assembly cools and solidifies. Preferably, the catheter shaft distal end and the soft tip or intermediate segment proximal end are each formed with a like plurality of ungular cut sections that are complementary in shape to one another, whereby the ungular cut sections are aligned with and mated together along the attachment junction.